

Serial No.: 10/550,835
Examiner: S. Cattungal
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1-8. (Cancelled)

9. (New) An ultrasonic probe, comprising: an ultrasonic element for transmitting and receiving an ultrasonic signal; a signal line for transmitting an electric signal to or from the ultrasonic element; and a ground line for supplying a ground potential to the ultrasonic element, the ultrasonic probe further comprising:

a sensor signal substrate and a sensor ground substrate connected electrically with the ultrasonic element; and

a cable substrate that electrically connects the sensor signal substrate and the sensor ground substrate with the signal line and the ground line, respectively,

wherein the sensor ground substrate and the cable substrate are connected directly or via a relay ground substrate, and

at least a part of the cable substrate is covered with the sensor ground substrate or the relay ground substrate.

10. (New) The ultrasonic probe according to claim 9, wherein at least a part of the sensor signal substrate is covered with the sensor ground substrate or the relay ground substrate.

11. (New) The ultrasonic probe according to claim 9, wherein a connecting portion between the sensor signal substrate and the cable substrate is covered with the sensor ground substrate or the relay ground substrate.

12. (New) The ultrasonic probe according to claim 11, wherein the connecting portion between the sensor signal substrate and the cable substrate is covered with the sensor ground substrate or the relay ground substrate entirely.

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13. (New) The ultrasonic probe according to claim 9, wherein at least a part of the ultrasonic element is covered with the sensor ground substrate or the relay ground substrate.

14. (New) The ultrasonic probe according to claim 13, wherein an ultrasonic wave transmitting/receiving surface of the ultrasonic element is covered with the sensor ground substrate or the relay ground substrate.

15. (New) The ultrasonic probe according to claim 14, wherein the ultrasonic wave transmitting/receiving surface and peripheral surfaces of the ultrasonic element are covered with the sensor ground substrate or the relay ground substrate.

16. (New) The ultrasonic probe according to claim 14, wherein a plurality of grooves are formed on a part of the sensor ground substrate or the relay ground substrate that covers the ultrasonic wave transmitting/receiving surface of the ultrasonic element, the grooves dividing the ultrasonic element electrically into a plurality of oscillators.

17. (New) The ultrasonic probe according to claim 14,
wherein the sensor ground substrate is arranged so as to surround a periphery of the ultrasonic element, the sensor signal substrate, and the cable substrate, and
a portion of the sensor ground substrate that is drawn over a surface of the ultrasonic element other than a surface connected with the sensor signal substrate is connected with the cable substrate or a part of the sensor ground substrate.